

**Notice of Allowability****Application No.**

10/676,690

**Applicant(s)**

BREWER ET AL.

**Examiner**

Art Unit

Elvis O. Price

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to the RCE filed 10/26/04.
2.  The allowed claim(s) is/are 1-15.
3.  The drawings filed on 01 October 2003 are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some\*    c)  None    of the:
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.  
(a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
    1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.  
(b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of  
    Paper No./Mail Date \_\_\_\_\_.  
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
    Paper No./Mail Date \_\_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
    of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
    Paper No./Mail Date \_\_\_\_\_
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_

***Reasons for Allowance***

The following is an examiner's statement of reasons for allowance: Applicants' process for producing purified 1,3-propanediol is unobvious over the prior art of record. Although the closest prior art of record (Sunkara et al. WO 00/10953 and US Pat. 6,235,948 B1) teaches the removal of colored impurities from a crude 1,3-propanediol mixture, comprising drying the 1,3-propanediol (removing water) before contacting the crude 1,3-propanediol with a solid heterogeneous acid catalyst (e.g., acid ion exchange resins, acid zeolites, etc.), the prior art of record does not teach or suggest contacting crude 1,3-propanediol, which comprises a MW 176 cyclic acetal, inter-alia, with an acid catalyst prior to drying the crude 1,3-propanediol mixture and/or the prior art of record does not teach or suggest converting a MW 176 cyclic acetal to more volatile materials by contacting an acid catalyst with a crude 1,3-propanediol mixture comprising a MW 176 cyclic acetal followed by the concerted distillation steps (as recited in the present claims) so as to remove a more volatile component (derived from the conversion of the MW 176 cyclic acetal) from the 1,3-propanediol. Such a modification would not have been obvious to one having ordinary skill in the art because there is no evidence or reasoning taught or suggested in the closest prior art of record that would lead one having ordinary skill in the art to conclude that the MW 176 cyclic acetal is necessarily or inherently contained in the prior art's crude 1,3-propanediol mixture. Additionally, one having ordinary skill in the art would not have surmised that the MW 176 cyclic acetal is converted to more volatile materials which are subsequently separated from the crude 1,3-propanediol via distillation, considering that the closest prior art of record

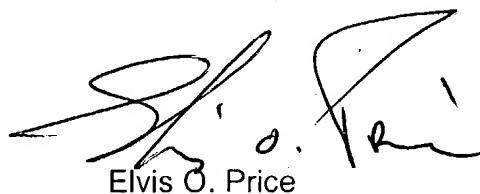
teaches that the 1,3-propanediol is distilled from less volatile impurities (less volatile impurities remained in the distillation flask) and makes no mention of a more volatile impurity that is separated from the 1,3-propanediol. All claims (1-15) are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elvis O. Price whose telephone number is 571 272-0644. The examiner can normally be reached on 8:30 am to 5:00 pm; Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571 272-0646. The fax phone numbers for the organization where this application or proceeding is assigned is 703 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-1235.



Elvis O. Price

November 5, 2004